DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING SERVICES
Office of Structural Materials
Quality Assurance and Source Inspection

Bay Area Branch
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Contract #: 04-0120F4
Cty: SF/ALA Rte: 80 PM: 13.2/13.9
File #: 1.28

WELDING INSPECTION REPORT

Resident Engineer: Siegenthaler, Peter
Address: 333 Burma Road
City: Oakland, CA 94607

Report No: WIR-017530
Date Inspected: 20-Oct-2010

Project Name: SAS Superstructure
Prime Contractor: American Bridge/Fluor Enterprises, a JV
Contractor: American Bridge/Fluor Enterprises, a JV

OSM Arrival Time: 630
OSM Departure Time: 1500
Location: Job Site

CWI Name: See below

Inspected CWI report:	☑ Yes	☐ No	☐ N/A	**CWI Present:**	☑ Yes	☐ No	
Electrode to specification:	☑ Yes	☐ No	☐ N/A	**Rod Oven in Use:**	☑ Yes	☐ No	☐ N/A
Qualified Welders:	☑ Yes	☐ No	☐ N/A	**Weld Procedures Followed:**	☑ Yes	☐ No	☐ N/A
Approved Drawings:	☑ Yes	☐ No	☐ N/A	**Verified Joint Fit-up:**	☑ Yes	☐ No	☐ N/A
				Approved WPS:	☑ Yes	☐ No	☐ N/A
				Delayed / Cancelled:	☐ Yes	☑ No	☐ N/A

Bridge No: 34-0006
Component: SAS OBG

Summary of Items Observed:

The Quality Assurance (QA) Inspector, Rick Bettencourt was on site at the job site between the times noted above. The QA Inspector was on site to randomly observe the in process welding and inspection of the weld joints identified as 7E/8E-A and hole restoration, and the following observations were made:

7E/8E-A5

Upon the arrival of the QA Inspector, the ABF welder identified as Fred Kaddu was setting up to perform excavations and weld repairs of previously rejected and indicated weld defects. The QA Inspector randomly observed the ABF welder begin excavating the indicated area of the above identified weld joint. The QA Inspector noted the ABF welder was utilizing a burr bit grinder to perform the weld excavation. The QA Inspector randomly observed the excavation through completion. The QA Inspector performed visual testing and random dimensional verification of the excavation. The QA Inspector randomly observed the first excavation dimensions to be 120mm X 22mm X 14mm deep. The QA Inspector noted the excavation appeared to have been ground and blended to a weldable profile. The QA Inspector noted the Y location of the excavation was Y=4180mm-4300mm.The QA Inspector randomly observed the QC Inspector Tom Pasqualone perform magnetic particle testing of the excavated area to ensure all weld defects had been removed, the QA Inspector noted the QC Inspector did not locate any relevant indications at the time of the testing. The QA Inspector randomly observed the ABF welder preheat and begin performing the shielded metal arc welding (SMAW) repair. The QA Inspector randomly observed the ABF welder to be utilizing 1/8” E7018 low hydrogen electrodes with 135 Amps. The QA Inspector noted the ABF welder spent the remainder of the QA Inspectors shift performing the SMAW repair.

3E-pp23.5-E2-SE

The QA Inspector randomly observed the American Bridge/Fluor (ABF) welder Wai Kitlai setting up to begin performing the shielded metal arc welding SMAW root/fill passes. The QA Inspector previously performed random visual testing of the back gouged groove weld, and noted no visual discrepancies. The QA Inspector randomly observed the SE QC Inspector Patrick Swain perfrom magnetic particle testing (MT) of the back gouged root area. The QA Inspector noted after some minor grinding of MT indications the MT was acceptable the ABF welder proceeded. The QA Inspector randomly observed the fit up appeared to be in general compliance with ABF-WPS-D1.5-1030. Upon the arrival of the QA inspector, it was noted the SMAW 4G back weld appeared to be complete. The QA Inspector randomly observed the SE QC Inspector Patrick Swain was on site monitoring the in process welding. The QA Inspector randomly observed the SMAW parameters were 134 Amps while utilizing 1/8" E7018 low hydrogen electrodes. The QA Inspector noted the SMAW parameters appeared to be in general compliance with the contract requirements. The QA Inspector randomly observed the ABF welder continue to perform the SMAW root/fill passes at the above identified location.

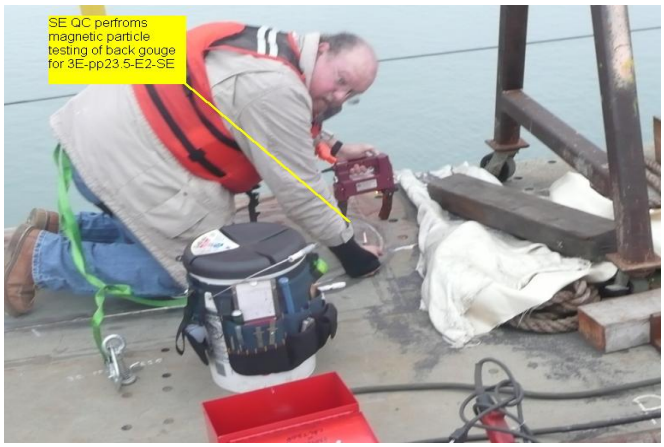
1E-pp10.5-E5-LS-W (485 HPS)
The QA Inspector randomly observed the American Bridge/Fluor (ABF) welder identified as Hua Qinag Hwang begin setting up to perform the SMAW root pass. The QA Inspector randomly verified the bevel angles and noted they appeared to be in general compliance with the contract requirements. The QA Inspector randomly observed the ABF welder had previously installed ceramic backing bar to the backside of the weld joint and held in place with adhesive. The QA Inspector performed a random visual inspection of the fit up and noted the root opening, bevel angle and planar alignment of the complete joint penetration (CJP) groove weld appeared to meet the general requirements of the contract documents.

The QA Inspector randomly observed the ABF welder had previously set up the induction preheating machine and blankets to side of the stiffener opposite the welding. The QA Inspector noted the material must maintain the minimum required preheat of 200°F through out the duration of welding. The QA Inspector randomly observed the ABF welder preheat the area to approximately 230°F prior to performing any SMAW. After the minimum required preheat had been achieved, the QA Inspector randomly observed the ABF welder begin the SMAW root pass. The QA Inspector noted the SE QC Inspector John Pagliero was on site to monitor and record the in process production welding at the above identified location. The QA Inspector randomly observed the SMAW parameters to be approximately 123 Amps with 1/8" E9018 low hydrogen electrodes. The QA Inspector randomly observed the in process welding parameters and dimensional tolerances appeared to be in general compliance with the approved welding procedure identified as ABF-WPS-D1.5-1012-3. The QA Inspector noted the ABF welder did not complete the SMAW on the QA Inspectors shift.

2E-pp17.5-E2-LS-E (485 HPS)
The QA Inspector randomly observed the American Bridge/Fluor (ABF) welder identified as Xiao Jian Wan begin setting up to perform the SMAW root pass. The QA Inspector randomly verified the bevel angles and noted they appeared to be in general compliance with the contract requirements. The QA Inspector randomly observed the ABF welder had previously installed ceramic backing bar to the backside of the weld joint and held in place with adhesive. The QA Inspector performed a random visual inspection of the fit up and noted the root opening, bevel angle and planar alignment of the complete joint penetration (CJP) groove weld appeared to meet the general requirements of the contract documents.

The QA Inspector randomly observed the ABF welder had previously set up the induction preheating machine and

blankets to side of the stiffener opposite the welding. The QA Inspector noted the material must maintain the minimum required preheat of 200°F through out the duration of welding. The QA Inspector randomly observed the ABF welder preheat the area to approximately 250°F prior to performing any SMAW. After the minimum required preheat had been achieved, the QA Inspector randomly observed the ABF welder begin the SMAW root pass. The QA Inspector noted the SE QC Inspector John Pagliero was on site to monitor and record the in process production welding at the above identified location. The QA Inspector randomly observed the SMAW parameters to be approximately 135 Amps with 1/8" E9018 low hydrogen electrodes. The QA Inspector randomly observed the in process welding parameters and dimensional tolerances appeared to be in general compliance with the approved welding procedure identified as ABF-WPS-D1.5-1012-3. The QA Inspector noted the ABF welder did not complete the SMAW on the QA Inspectors shift.



Summary of Conversations:

As noted above.

Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Mohammad Fatemi (916)-813-3677, who represents the Office of Structural Materials for your project.

Inspected By:	Bettencourt,Rick	Quality Assurance Inspector
Reviewed By:	Levell,Bill	QA Reviewer